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William F Lawrence
Frommer Lawrence & Haug
745 Fifth Avenue
New York, NY 10151

EXAMINER	
ORWIG, KEVIN S	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/533,926	HOFFMANN ET AL.	
	Examiner	Art Unit	
	Kevin S. Orwig	1611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 October 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,4,7 and 9-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,4,7 and 9-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/29/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

The amendments and arguments filed Oct. 28, 2008 are acknowledged and have been fully considered. Claims 2, 5, 6, and 8 are cancelled (it is noted that the cancellation of claim 2 was omitted from the list of cancelled claims on page 6 of the reply; applicants' attention is directed to 37 CFR 1.121; claims 1, 3, 4, 7, and 9-13 are amended; claims 12 and 13 have been added.

The objections to claims 1, 7, and 9 are withdrawn in light of the claim amendments.

The rejection of claims 5-10 under 35 U.S.C. 112, 1st paragraph, lack of written description, is withdrawn in light of the claim amendments.

The rejection of claim 6 under 35 U.S.C. 112, 1st paragraph, lack of enablement, is withdrawn in light of the claim cancellation.

The rejection of claims 1-11 under 35 U.S.C. 112, 2nd paragraph, is withdrawn in light of the claim amendments.

The rejection of claims 2 and 5 under 35 U.S.C. 103(a) as being unpatentable over Zhang *et al.* (U.S. Patent No. 6,264,981; Issued July 24, 2001) in view of Patel *et al.* (U.S. Patent No. 6,248,363; Issued June 19, 2001) and in further view of Weete *et al.* (U.S. Patent No. 5,703,255; Issued December 30, 1997), as evidenced by Stedman's Medical Dictionary (Lippincott Williams & Wilkins, 2000; accessed online 5/13/08), and

by Raisch *et al.* Ann. Pharmacother. 2002 February; 36(2):312-21 is withdrawn in view of the cancellation of the claims.

The rejection of claim 6 under 35 U.S.C. 103(a) as being unpatentable over Zhang *et al.* in view of Patel *et al.* and in further view of Shen *et al.* (U.S. Patent No. 6,255,490; Issued July 3, 2001) is withdrawn in view of the cancellation of the claim.

The rejection of claim 8 under 103(a) over Zhang *et al.* in view of Patel *et al.* and in further view of Meyer *et al.* (U.S. Patent No. 5,977,144) is withdrawn in light of the cancellation of the claim.

The rejection of claims 1, 3, 4, 7, and 9-11 under 35 U.S.C. 103(a) is maintained.

New grounds of rejections for claims new claims 12 and 13 are set forth below.

Claim Rejections - 35 USC § 112 (1st Paragraph)

Claims 1, 3, 4, 7, and 9-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The response filed Oct. 28, 2008 has introduced NEW MATTER into the claims. Amended claims 1, 7, and 9 recite the broad genus of salt (or salts) of the claimed active compounds. Support in the instant application is found for *acid addition* salts of

the claimed active compounds. However, written description support is lacking for the broader genus of all salts thereof, as is instantly claimed. In the absence of support for *all* salts of the claimed compounds, the recitations, "...salts thereof" in claim 1, "...salt" in claim 7, and "...a salt thereof" in claim 9 are new matter and must be removed from the claims.

The response did not point out where support for amended claims 1 and 9 could be found in the originally filed disclosure. Although the PTO has the initial burden of presenting evidence or reasons why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claims, when filing an amendment an applicant should show support in the original disclosure for new or amended claims. See MPEP 714.02 and 2163.06 ("Applicant should therefore specifically point out the support for any amendments made to the disclosure."). Instant claims 1 and 9 now recite limitations, which were not clearly disclosed in the specification as filed, and now change the scope of the instant disclosure as filed. Such limitations recited in amended claims 1 and 9, which did not appear in the specification, as filed, introduce new concepts and violate the description requirement of the first paragraph of 35 U.S.C 112. Applicant is required to provide sufficient written support for the limitations recited in present claims 1 and 9 in the specification or claims, as-filed, or remove these limitations from the claims in response to this Office Action.

Claim Rejections - 35 USC § 112 (2nd Paragraph)

Claims 1, 3, 4, 7, and 9-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation, "and salts thereof" in the last line of claim 1 renders the claims indefinite. It is unclear whether this recitation is intended to refer to all the compounds in the Markush group, or only to the last compound, which immediately precedes the limitation. Thus, the metes and bounds of the claims are unclear.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3, 4, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang *et al.* (U.S. Patent No. 6,264,981; Issued July 24, 2001) in view of Patel *et al.* (U.S. Patent No. 6,248,363; Issued June 19, 2001) and in further view of Weete *et al.* (U.S. Patent No. 5,703,255; Issued December 30, 1997), as evidenced by Stedman's Medical Dictionary (Lippincott Williams & Wilkins, 2000; accessed online 5/13/08), and by Raisch *et al.* Ann. Pharmacother. 2002 February; 36(2):312-21.

1. Zhang *et al.* disclose an oral transmucosal drug formulation comprising a pharmaceutical agent in solid solution with a dissolution agent (abstract; column 5, lines 40-51; column 6, lines 31-33) and disclose lecithin as one of the acceptable dissolution agents (column 7, line 29). It is noted that the meaning of "planiform" is synonymous with "having a flat or flattened shape". Zhang *et al.* disclose that the dosage form may take the form of, *inter alia*, a tablet, lozenge, or buccal or mucosal patch (column 5, lines 48-51), any one of which can have a flat or flattened shape and is therefore "planiform". It is further noted that lecithin is commonly accepted to consist almost entirely of phosphatidylcholine and is defined by Stedman's Medical Dictionary to consist of " 3-sn-phosphatidylcholines, phospholipids that on hydrolysis yield two fatty acid molecules and a molecule each of glycerophosphoric acid and choline" (i.e. phosphatidylcholine). Thus the lecithin dissolution agent of Zhang *et al.* reads on the phosphatidylcholine fraction of the instant application. Zhang *et al.* further disclose that the dosage form can be used to control the rate of dissolution (i.e. solubility as set forth in the specification of Zhang *et al.*) (column 5, lines 31-35; column 8, lines 12-17 and 56-62). Zhang *et al.* do

not explicitly teach that the phosphatidyl choline dissolution agent (i.e. phosphatidylcholine fraction) of instant claim 1 contains fatty acid residues that are at least 90% saturated. However, Patel *et al.* disclose solid pharmaceutical compositions formulated for oral or transmucosal use (column 41, lines 51-54) in the form of, *inter alia*, tablets, wafers, buccal or sublingual solids, films, and strips (column 41, lines 39-54) containing phosphatidylcholine or *hydrogenated* lecithins (column 31, lines 23, and 59-60). It is noted that commonly used hydrogenation methods typically result in quantitative saturation (i.e. 99-100% conversion of unsaturated fatty acids to saturated fatty acids) as evidenced by Weete *et al.* with phosphatidylcholine (example 2). In view of Weete *et al.* it is clear that the hydrogenated lecithins of Patel *et al.* are at least 90% saturated. Since Patel *et al.* disclose that hydrogenated lecithin is a suitable component for use in oral transmucosal delivery forms, it would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to substitute one known surfactant (e.g. hydrogenated lecithin) for another in the dosage form of Zhang *et al.*, thus reading on instant claim 1.

2. Instant claim 2 recites the phosphatidylcholine fraction of claim 1 wherein said fraction comprises at least 80% by weight. As discussed above, Patel *et al.* disclose hydrogenated lecithin as a suitable surfactant for use in a solid oral transmucosal dosage form. Patel *et al.* further provide examples of dosage forms where the lipid fraction comprises 80% or greater by weight of the composition (examples 16, 17, 21, and 26). While these examples do not explicitly illustrate hydrogenated lecithin as the lipid fraction, hydrogenated lecithin is clearly suitable as the lipid fraction as disclosed in

the specification (as discussed above). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute hydrogenated lecithin for the lipid fractions named in any one of these examples at a range of 80% by weight or greater to produce a dosage form with the desired properties.

3. Instant claim 3 recites the administration form of claim 1 comprising polyvinylpyrrolidone as an additive. Patel *et al.* disclose a variety of functionally equivalent solubilizers (i.e. additives) including polyvinylpyrrolidone (column 37, lines 49-50), thus reading on claim 3. Based on the reasoning applied above for instant claim 1, it would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to include a known additive for one oral transmucosal dosage form in another to produce a dosage form with the desired properties.

4. Instant claim 4 recites the administration form of claim 1 wherein the active compound is suitable for treating dependence (i.e. addiction) on addiction-inducing drugs. Zhang *et al.* teach that the pharmaceutical agent of their invention may be any drug substance used for, *inter alia*, prevention, control, or treatment of a condition. Zhang *et al.* further teach that the dosage form can be used with "a variety of drugs affecting the central nervous system" including naloxone (column 9, lines 39-53), which is well known to be useful in treating opioid addiction (see Raisch *et al.*, abstract). Thus, in view of Patel *et al.* per the discussion above, it would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to include a drug to treat addiction (i.e. naloxone), reading on claim 4.

5. Instant claim 5 recites the administration form of claim 1 wherein the active compound is a fused indole derivative. As noted above (paragraph 10), there is an issue of indefiniteness with the language in this claim. While the meaning of 'derivative' in this claim is unclear, for the purpose of this rejection, the examiner construes this to mean any fused indole compound. Zhang *et al.* teach that the pharmaceutical agent of their invention may be any drug substance used for, *inter alia*, prevention, control, or treatment of a condition (column 6, lines 44-63). However, specific fused indole compounds are not disclosed. Patel *et al.* disclose the fused indole compound ergotamine as a suitable active ingredient in the oral transmucosal dosage form. Thus, it would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to substitute one known oral transmucosal active agent (i.e. a fused indole compound) for another as the active compound in the invention of Zhang *et al.*

Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang *et al.* in view of Patel *et al.* and Weete *et al.*, and in further view of Shen *et al.* (U.S. Patent No. 6,255,490; Issued July 3, 2001).

6. The teachings of Patel and Shen were discussed *supra*. Instant claim 7 recites the administration form of claim 1 wherein the active compound is ebibatidine. Zhang *et al.* and Patel *et al.* teach the solid pharmaceutical administration form as discussed above (paragraph 12). Zhang *et al.* further teach that the pharmaceutical agent of their invention may be any drug substance used for, *inter alia*, prevention, control, or treatment of a condition (column 6, lines 44-63). In particular, use of this dosage form

with anti addiction agents is disclosed (column 6, lines 56 and 58). However, epibatidine is not explicitly disclosed.

7. Shen *et al.* disclose epibatidine in addition to a wide variety of similar compounds, some of which are useful in the treatment of cognitive, neurological, and mental disorders and disorders characterized by altered cholinergic function (i.e. addiction) (column 7, lines 58-63). Thus, it would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to substitute a known anti-addictive cholinergic receptor agonist (i.e. epibatidine) as the active compound in the invention of Zhang *et al.*

Claims 1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang *et al.* in view of Patel *et al.*, Weete *et al.*, and in further view of Cary (U.S. Patent No. 6,197,827; Issued March 6, 2001).

8. Instant claim 9 recites the administration form of claim 1 wherein the active compound is selected from the group of mecamylamine, hypericin, CP-52655, and buproprion. Zhang *et al.* and Patel *et al.* teach the solid pharmaceutical administration form as discussed above (paragraph 12). Zhang *et al.* further teach that the pharmaceutical agent of their invention may be any drug substance used for, *inter alia*, prevention, control, or treatment of a condition (column 6, lines 44-63). In particular, use of this dosage form with anti addiction agents is disclosed (column 6, lines 56 and 58). However, the compounds of instant claim 9 are not explicitly disclosed.

9. Cary discloses both mecamylamine and bupropion as useful agents in smoking cessation therapy and treatment of cocaine addiction (abstract). Thus, it would have

been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to substitute one known anti-addictive drug (i.e. mecamylamine or bupropion) for another as the active compound in the invention of Zhang *et al.*

Claims 1 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang *et al.* in view of Patel *et al.*, Weete *et al.*, and in further view of Plotnikoff *et al.* (U.S. Patent No. 3,706,831; Issued December 19, 1972).

10. Instant claim 10 recites the administration form of claim 1 wherein the active compound is selected from oxazolidinone derivatives and befloxatones. As noted above (paragraph 10), there is an issue of indefiniteness with the language in this claim. Zhang *et al.* and Patel *et al.* teach the solid pharmaceutical administration form as discussed above (paragraph 12). Zhang *et al.* further teach that the pharmaceutical agent of their invention may be any drug substance used for, *inter alia*, prevention, control, or treatment of a condition (column 6, lines 44-63). In particular, use of this dosage form with anti addiction agents is disclosed (column 6, lines 56 and 58). However, the compounds of instant claim 10 are not explicitly disclosed. Plotnikoff *et al.* disclose various oxazolidinones as useful agents in the treatment of drug addiction (abstract). Thus, it would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to substitute one known anti-addictive drug (i.e. an oxazolidinone) for another as the active compound in the invention of Zhang *et al.*

Claims 1 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang *et al.* in view of Patel *et al.*, Weete *et al.*, and in further view of Serra *et al.* (Serra, S. *et al.* Eur. J. Pharmacol. 2001 November; 430(2-3):369-371).

11. Instant claim 11 recites the administration form of claim 1 wherein the active compound is the cannabinoid receptor antagonist SR 141716. Zhang *et al.* and Patel *et al.* teach the solid pharmaceutical administration form as discussed above (paragraph 12). Zhang *et al.* further teach that the pharmaceutical agent of their invention may be any drug substance used for, *inter alia*, prevention, control, or treatment of a condition (column 6, lines 44-63). In particular, use of this dosage form with anti addiction agents is disclosed (column 6, lines 56 and 58). However, SR 141716 is not explicitly disclosed. Serra *et al.* teach that SR 141716 is useful in the treatment of alcohol addiction (abstract). Thus, it would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to substitute one known anti-addictive drug (i.e. SR 141716) for another as the active compound in the invention of Zhang *et al.*

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang *et al.* in view of Patel *et al.*, and Weete *et al.*, as applied to claims 1, 3, 4, and 12 above, and in further in view of Majeti (U.S. 5,599,554; Issued Feb. 4, 1997).

12. The teachings of Zhang *et al.*, Patel *et al.*, and Weete *et al.* were presented supra. The references do not teach the use of a copolymer comprised of maleic acid and an alkyl vinyl ether. However, the use of this type of copolymer in oral transmucosal dosage forms was known in the art at the time of the invention.

13. For example, Majeti discloses a transmucosally administrable composition for the treatment of addiction (e.g. nicotine craving or smoking withdrawal) (abstract). Majeti teaches that alkyl or polyvinyl ether-maleic acid copolymers are suitable polymers to include in the transmucosal composition and are useful to create a mucoadhesive film

(column 4, lines 59-64). Zhang teaches that the formulation can be combined with other excipients as needed in order to facilitate the administration and delivery through oral mucosal tissue (column 5, lines 45-48). Therefore, it would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to include an alkyl vinyl ether-maleic acid copolymer in the composition of Zhang, to provide an administration form with satisfactory mucoadhesive properties as taught by Majeti. One would have had a high expectation of success in doing so since Patel teaches the use of a variety of copolymers in conjunction with similar lipid-containing dosage forms (column 30, lines 65-66; column 39, line 41; column 43, lines 40-42).

Response to Arguments

Applicants' arguments have been fully considered but are not persuasive. Applicants argue that the characterization that lecithin is commonly accepted to consist almost entirely of phosphatidylcholine is inappropriate (page 7 of the response).

Firstly, the examiner disagrees, and is of the position that the characterization is proper. The examiner provided evidence from a medical reference (Stedman's Medical Dictionary) showing that lecithin was defined as being synonymous with phosphatidylcholine at the time of the invention. Applicant argues that Stedman's is a medical dictionary and not related to pharmaceutical compositions. The examiner disagrees and notes that the medical and pharmaceutical arts are in many respects coextensive, and that a medical dictionary such as Stedman's is not only relevant to, but part of the field of the instant invention. It is noted that in discussing the field of the invention, applicants themselves note that pharmaceutical administration forms facilitate

the oral administration of medicaments to certain patients who experience difficulty in ingesting other medicinal forms (paragraph [0005]). Thus, it is clear that the instant invention has significant relevance to the medical arts.

Secondly, while it is acknowledged that alternative definitions of lecithin can be found, the amount of phosphatidylcholine in the phosphatidylcholine fraction is not relevant since a specific amount of phosphatidylcholine in the fraction has not been claimed. It is noted that the term "fraction" or "phosphatidylcholine fraction" has not been given a special meaning in the specification, has not been explicitly described, and no working examples have been provided. Thus, the term has been given its plain and ordinary meaning and has been interpreted broadly to mean a portion of the composition comprising any amount of phosphatidylcholine. Thus, the examiner has relied on the Stedman's definition to demonstrate that it was commonly accepted in the art at the time of the invention that phosphatidylcholine is the major component of lecithin. The examiner points out that the definitions of lecithin provided by applicants in the response (from the Fiedler reference and Wikipedia) both support the examiner's position, that phosphatidylcholine is the major component of lecithin. In particular, the Wikipedia citation indicates that the two terms are sometimes synonymous, as was indicated by the Stedman's definition. Nonetheless, even when other components are present in lecithin, phosphatidylcholine is clearly the predominant component, and the fact that phosphatidylcholine is present in any amount would read on the claim as written.

Applicants argue that the other components present in lecithin are not at least

90% saturated and that Zhang does not teach a phosphatidylcholine fraction in which the fatty acid residues are at least 90% saturated (page 8 of the response). The examiner acknowledged this deficiency in Zhang in the previous Office action (page 11), and relied on Patel and Weete to cure this deficiency. Patel teaches hydrogenated lecithins (including Epikuron (Table 18), as in the instant specification, paragraph [0021]) and other hydrogenated phospholipids as preferred ionic surfactant components of the invention (column 31, lines 23-25; claims 18 and 44). Further, Patel teaches lecithin and phosphatidylcholine as a particularly preferred ionic surfactants (column 31, lines 59-60).

Given that Patel does not teach the specific method of hydrogenation, the ordinary artisan would look to the related literature for guidance. Weete provides this guidance, and a strong motivation to combine with the teachings of Patel and Zhang. For example, Weete teaches a method for removing non-choline phosphatides from lecithin to obtain pure phosphatidylcholine (abstract), and methods to hydrogenate this purified material (Example 2). Weete teaches that one of the most important uses of lecithin is as the primary functional ingredient in liposomes, which are important in the pharmaceutical industry as drug delivery vehicles. Weete teaches that 80 to 100% phosphatidylcholine is required for best results, particularly in the hydrogenated form (column 4, lines 55-63). Weete further teaches that hydrogenated phosphatidylcholine is more commercially desirable than the non-hydrogenated form (column 6, lines 56-59). Thus, one of ordinary skill in the art would look to Weete for guidance in methods of hydrogenation, but would recognize that phosphatidylcholine, particularly

hydrogenated phosphatidylcholine, would be highly beneficial as the ionic surfactant component of the compositions taught by Patel and Zhang.

Since Patel teaches lecithin and phosphatidylcholine as particularly preferred ionic surfactants, and since phosphatidylcholine was known to be the major component of lecithin at the time of the invention, it would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to substitute hydrogenated phosphatidylcholine in the compositions of Patel and Zhang, to provide a more stable phosphatidylcholine dosage form as taught by Weete. The ordinary artisan would have a high expectation of success in doing so since Patel teaches phosphatidylcholine, lecithin, and hydrogenated lecithin as functional equivalents and since Weete teaches that hydrogenated phosphatidylcholine is more desirable and useful in drug delivery vehicles, such as the instant invention.

Applicants argue that Patel teaches lecithins or hydrogenated lecithins, not phosphatidylcholine and hydrogenated lecithins (footnote on page 8 of response). This argument is irrelevant as pointed out above, not only because no amount of phosphatidylcholine has been claimed for the phosphatidylcholine fraction, but also because the prior art and cited references clearly establish that phosphatidylcholine is the major component of lecithin. One of ordinary skill in the art would have a reasonable expectation of success by substituting pure hydrogenated phosphatidylcholine for lecithin taught by Zhang in light of the teachings of Patel and Weete described above.

Applicants argue that there is no reason why one of ordinary skill in the art would

assume that the degree of conversion for the lecithins achieved by Weete was the degree of conversion in Patel (footnote on page 9 of the response). That is not true. Weete provides evidence that commonly used hydrogenation techniques for lecithins and in particular phosphatidylcholine result in complete conversion of the fatty acids to the saturated state (column 6, lines 60-61; see Example 2, wherein the fatty acids were *fully hydrogenated* (saturated)). In fact, there is no reason to believe that the teachings of Weete, which are stated to be conventional, would *not* result in conversion to at least 90% saturated fatty acids, and no evidence has been presented otherwise.

Applicants argue that one of ordinary skill in the art would not have had any reason to pick a specific amount of phosphatidylcholine out of the teaching of Patel (page 9 of the response). Again, this is not true. Firstly, Zhang provides the motivation to use at least 80% by weight of the dissolution agent. Zhang exemplifies oral transmucosal delivery formulations with greater than 80% weight of the dissolution agent (see Examples 1 and 2). Zhang clearly teaches that the dissolution agent may be lecithin, and based on the teachings of Patel, and Weete, one would be motivated to substitute hydrogenated phosphatidylcholine for lecithin, and would have a high expectation of success by doing so. Since Zhang teaches the use of the dissolution agent in amounts of greater than 80%, the ordinary artisan would use this amount. Additionally, as stated in the prior Office action, Patel also teaches the use of the lipid surfactants in amounts of at least 80% by weight (Examples 16, 17, 21, and 26). Thus, supporting the argument that the artisan would have a high expectation of success in combining Patel and Zhang.

Zhang teaches that the pharmaceutical agent of their invention may be any drug substance used for, *inter alia*, prevention, control, or treatment of a condition (column 6, lines 44-47). Zhang further teaches the specific drug classes of analgesics, anti-hypertensives, antibiotics, antidepressants, and antiobesity agents (column 6, lines 44-63), which collectively encompass all of the active compounds recited in claim 1 as amended. Thus, it would be obvious to one of ordinary skill in the art to include any member of these drug classes in the transmucosal drug delivery system of Zhang. Thus, the examiner cites Shen (epibatidine), Cary (mecamylamine and buproprion), Plotnikoff (oxazolidinones), and Serra (SR 141716) as evidence that each of these compounds was known in the art at the time of the invention to be useful in the treatment of various addictions, which is the only teaching required to cure the deficiency of Zhang for claims 4, 7, and 9-11.

Summary/Conclusion

Claims 1, 3, 4, 7, and 9-13 are rejected; claims 2, 5, 6, and 8 are cancelled.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin S. Orwig whose telephone number is (571)270-5869. The examiner can normally be reached Monday-Friday 7:00 am-4:00 pm (with alternate Fridays off). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sharmila Landau can be reached Monday-Friday 8:00 am-5:00 pm at (571)272-0614. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KSO

/David J Blanchard/
Primary Examiner, Art Unit 1643